

ANATOMICAL NOTES ON *MEDYLA INSCULPTA* (PFR.).

By HENRY SUTER.

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THROUGH the kindness of Mr. Laing, of Christchurch, New Zealand, who spent several months on Norfolk Island, I obtained a number of land-shells preserved in formalin, all, with one exception, being

MEDYLA (EUPLECTA) *INSCULPTA* (Pfeiffer).*Helix insculpta*, Pfeiffer: Proc. Zool. Soc., 1845, p. 129.

A number of the shells contained the animal, though not in a very good condition for dissection. However, I was able to examine the dentition and the genital organs, of which I propose to give a short account.

Animal.—With two short, broad shell lobes, the left divided into two; the foot (Fig. I) shows distinct diagonal and double parapodial grooves; there is a pronounced caudal pore, situated above the termination of the parapodial pore. The sole is tripartite.

Jaw (Fig. II).—Extremely thin and fragile, transparent, with a strong median projection on the cutting edge, the outline being repeated (as a remnant of an earlier stage of growth) a little higher up.

Radula (Fig. III).—Formula 35-7-1-7-35. The minute outer marginals have an aculeate mesodont, denticulated on its posterior edge, with a small base of attachment; on the succeeding inner teeth the denticles, numbering from three to four, become successively more and more distinct, whilst just a little below the point of the mesodont an ectodont appears, consisting of two cusps, which are at first separate, but subsequently are united at the base. The marginals next gradually assume a triangular shape, and the denticles on the mesodont disappear, whilst the ectodont becomes simple and larger. A few transitional teeth lead to the asymmetrical laterals, each with a short and stout mesocone, extending to the posterior edge of the base, and a rather stout ectodont. The central tooth is tricuspid, the side cusps well developed, and the mesodont of the same length as on the laterals.

Genitalia (Fig. IV).—Simple, the lower portion consisting of a large, muscular, subcylindrical penis sac with a retractor muscle at its posterior end, where also the vas-deferens enters. At the anterior portion of the penis sac, near the atrium, an appendix is inserted which has nearly half the length of the former, and is slightly distended distally. The vagina is formed by a rather large muscular pouch, provided with a tubular receptaculum seminis on the side towards the common orifice, it is slightly bent, and does not widen

out posteriorly. In some specimens there was no spermatheca, but only a small papilla in its place; these were, perhaps, immature individuals. The free oviduct is slightly swollen in the middle. In one specimen I found three embryos of different stages of growth embedded in a transparent gelatinous mass, indicating that the species is viviparous.

The dentition and genital organs most nearly resemble those of *Sitala anthropophagorum*, described and figured by Hedley,¹ who mentions the presence of a dart sac, but in his figure only an appendix of the penis, inserted further back than in *M. insculpta*, and a spermatheca are present.

The close relationship between *S. anthropophagorum* and *Medyla insculpta* goes far to support the view expressed by Dr. von Möllendorff² that *Kaliella*, *Sitala*, *Conoeplecta*, and *Euplecta* may perhaps be considered as only sections of one genus.

M. insculpta has been removed from *Helix* to *Nanina*, *Zonites*,

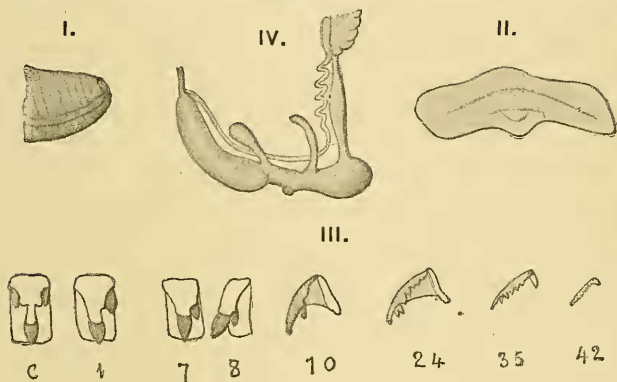


FIG. I. *Medyla insculpta* (Pfr.). Posterior portion of the foot, enlarged.
 " II. " " " " Jaw, much magnified.
 " III. " " " " Teeth of the radula, greatly magnified.
 " IV. " " " " Lower portion of the genitalia, much magnified.

Trochomorpha, and, finally, by Mousson to his genus *Trochonanina*. Dr. von Möllendorff has given good reasons for abandoning Mousson's genus, since it includes a number of now well-defined genera. The proper place for the species is, in my opinion, using Dr. von Möllendorff's latest classification, under the genus *Medyla*, Albers, section *Euplecta*, Semper.

When Pfeiffer described the shell its habitat was unknown, but later on it transpired that it came from Norfolk Island, and my

¹ Proc. Linn. Soc. New South Wales, ser. II, vol. ix, p. 336, pl. xxv, fig. 21; pl. xxvi, fig. 24.

² Bericht Senckenberg. Naturf. Gesell., 1893, p. 65.

specimens are from the same locality. There is, however, one thing that puzzles me: Pfeiffer, in his *Nom. Hel. Viv.*, 1881, p. 57, gives "*Helix basiodon*, Mor. [Siam]" as a synonym. He gives the habitat of *insculpta* as "Ins. Norfolk," "Siam" being only mentioned in brackets after the synonym. Tryon, on the other hand (*Man. Conch.*, ser. II, vol. II, p. 48), has the habitat: "Ins. Norfolk, ? Siam." It seems to me hardly possible that the same species should occur in two such widely separated localities, and I am confident that some member of our Society will kindly clear up this doubtful point. Was Morelet mistaken about the habitat when creating his species?
